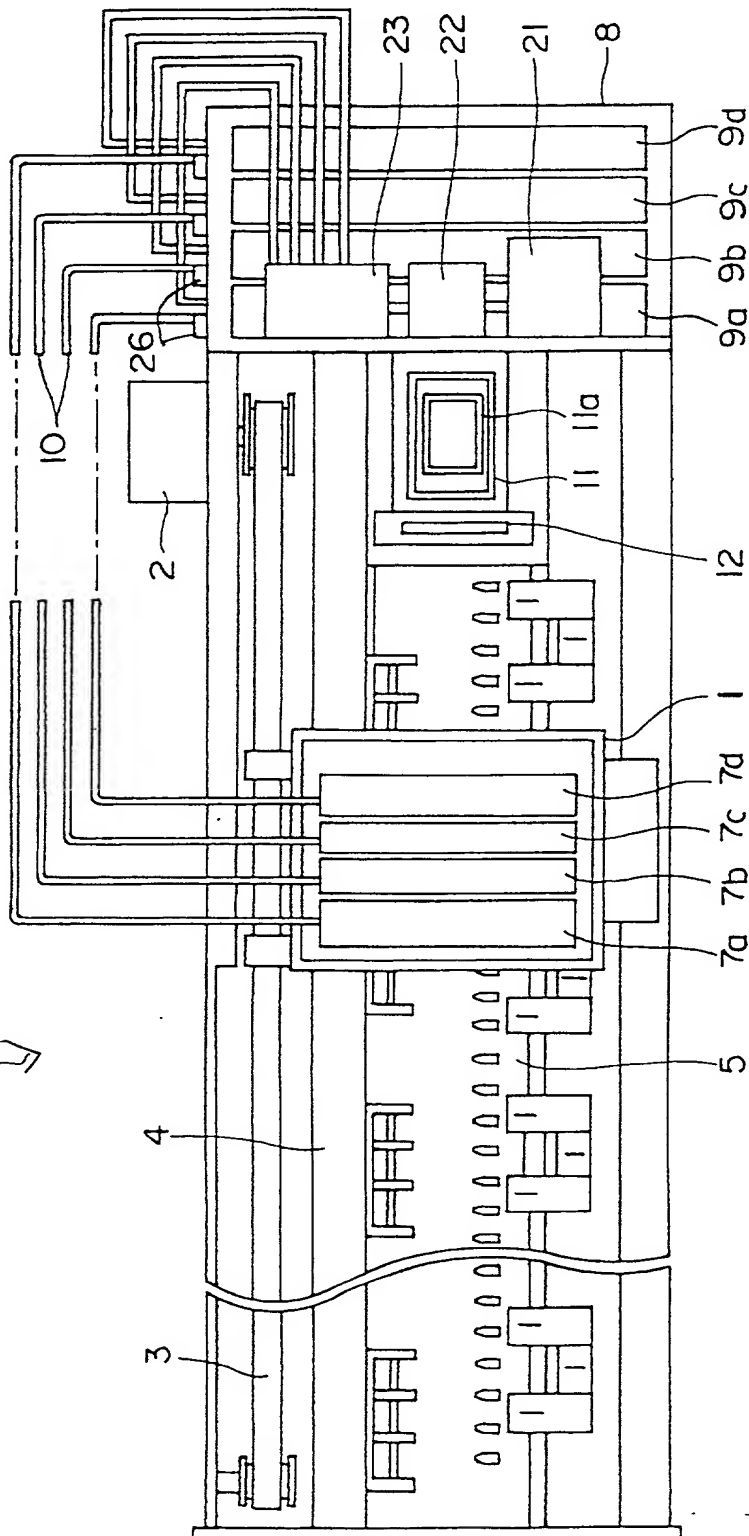


【書類名】 図面

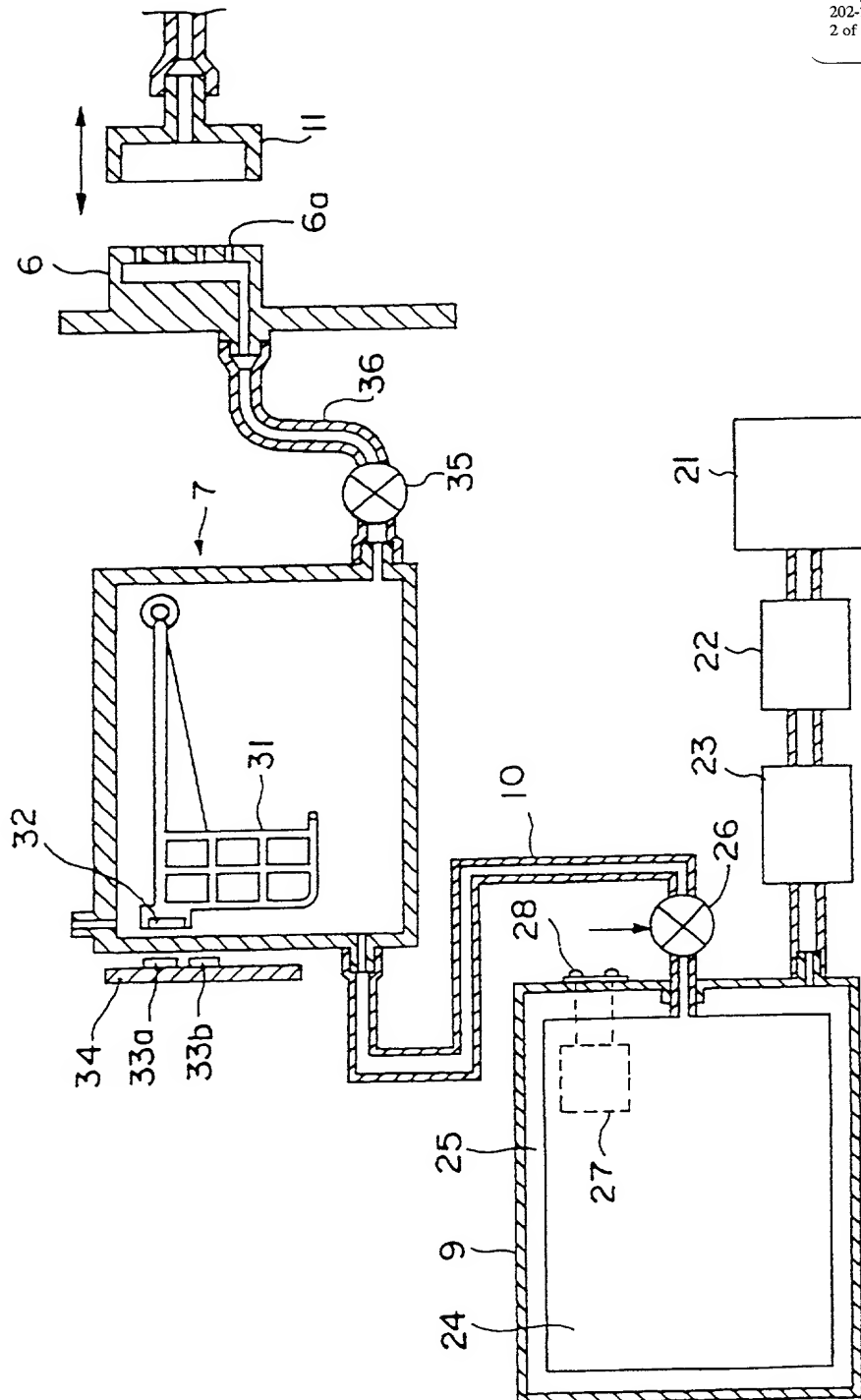
【図1】 Fig. 1

KOBAYASHI, et al. Q67835
INK JET TYPE RECORDING APPARATUS, INK TYPE
INFORMATION SETTING METHOD IN THE APPARATUS
AND INK CARTRIDGE USED IN THE APPARATUS
Filed December 26, 2001
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202-293-7060
1 of 17



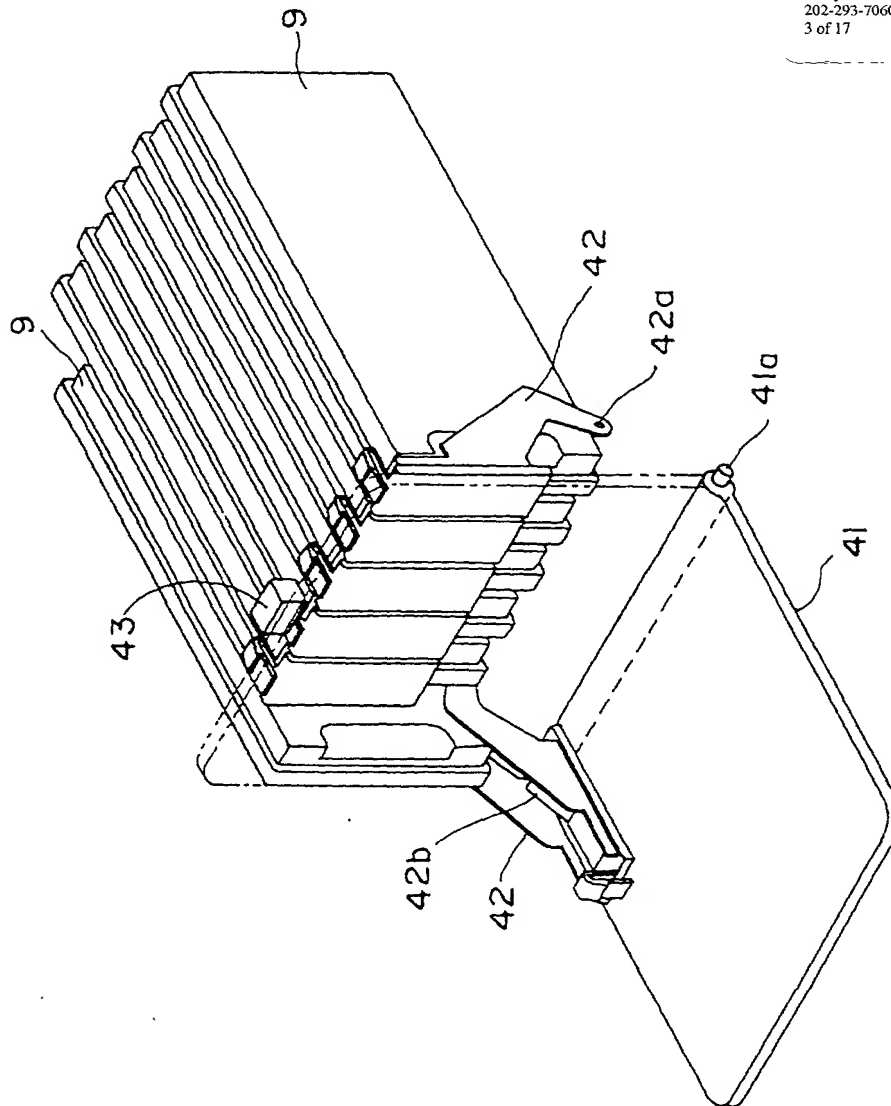
【図2】Fig. 2

KOBAYASHI, et al Q67835
INK JET TYPE RECORDING APPARATUS, INK TYPE
INFORMATION SETTING METHOD IN THE APPARATUS
AND INK CARTRIDGE USED IN THE APPARATUS
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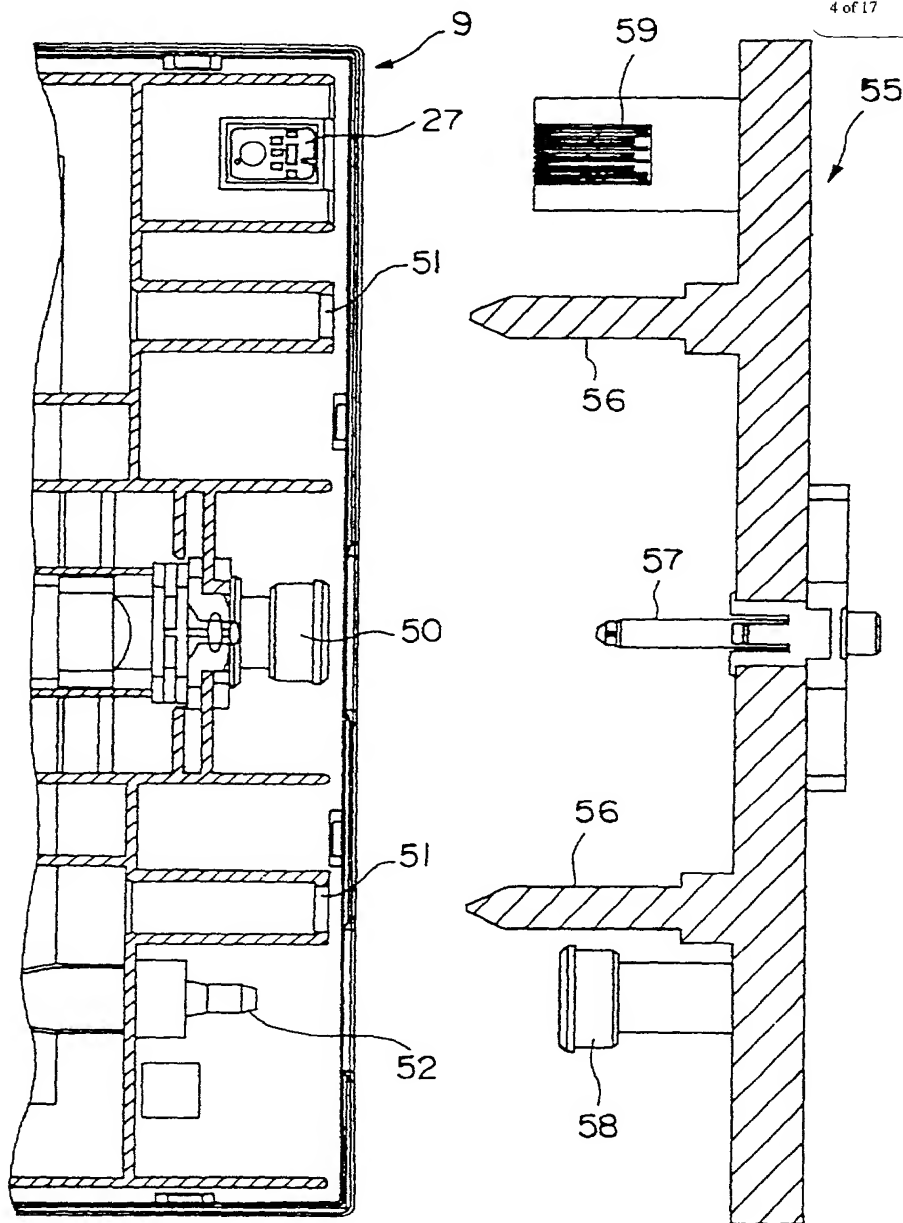
【図3】 Fig. 3

KOBAYASHI, et al. Q67835
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INFORMATION SETTING METHOD IN THE APPARATUS
AND INK CARTRIDGE USED IN THE APPARATUS
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【図4】 Fig. 4

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AND INK CARTRIDGE USED IN THE APPARATUS
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【図5】 Fig. 5

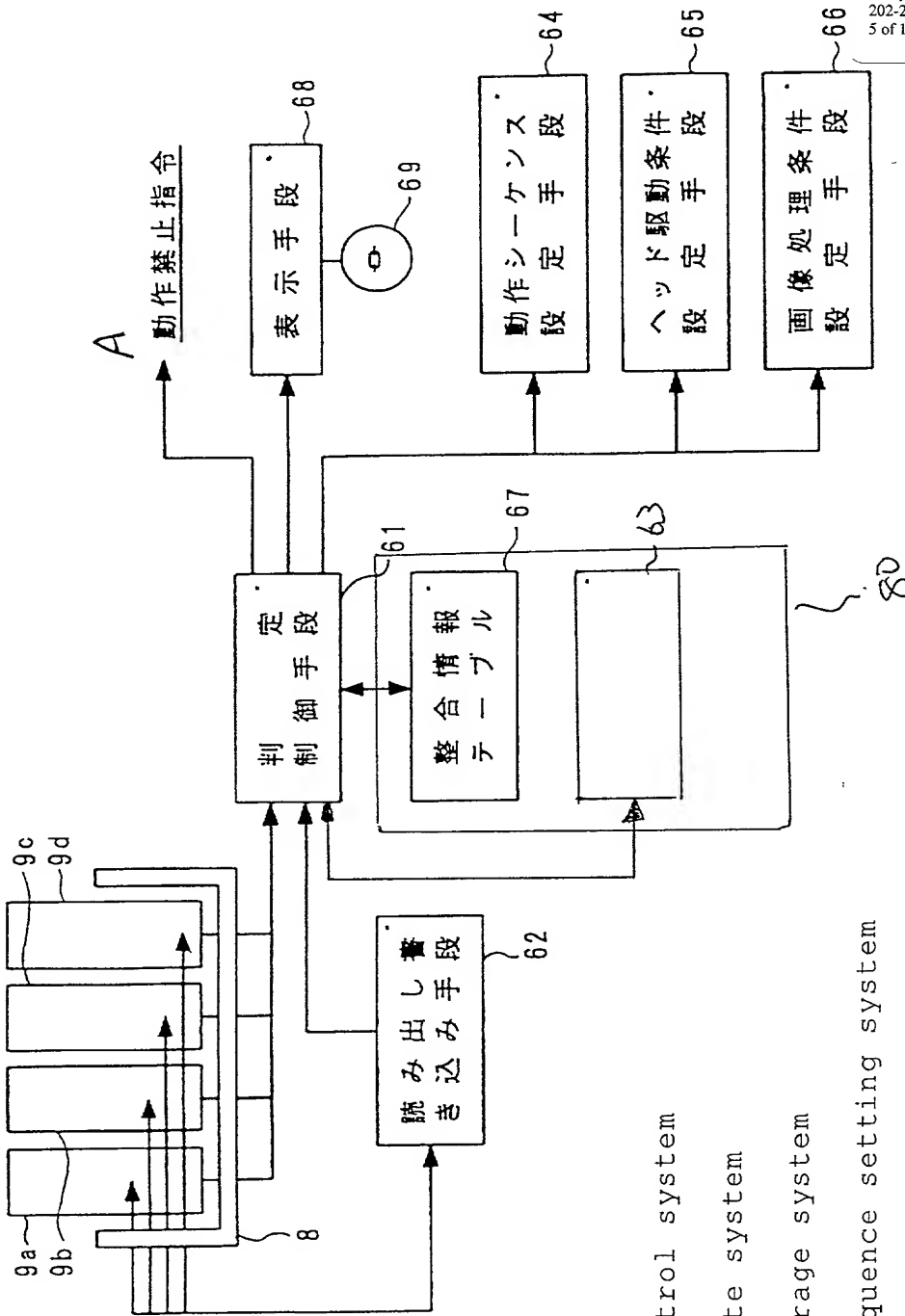


Fig. 5

61 decision control system

62 read and write system

63 ink type storage system

64 operation sequence setting system

65 head driving condition setting system

66 image processing condition setting system

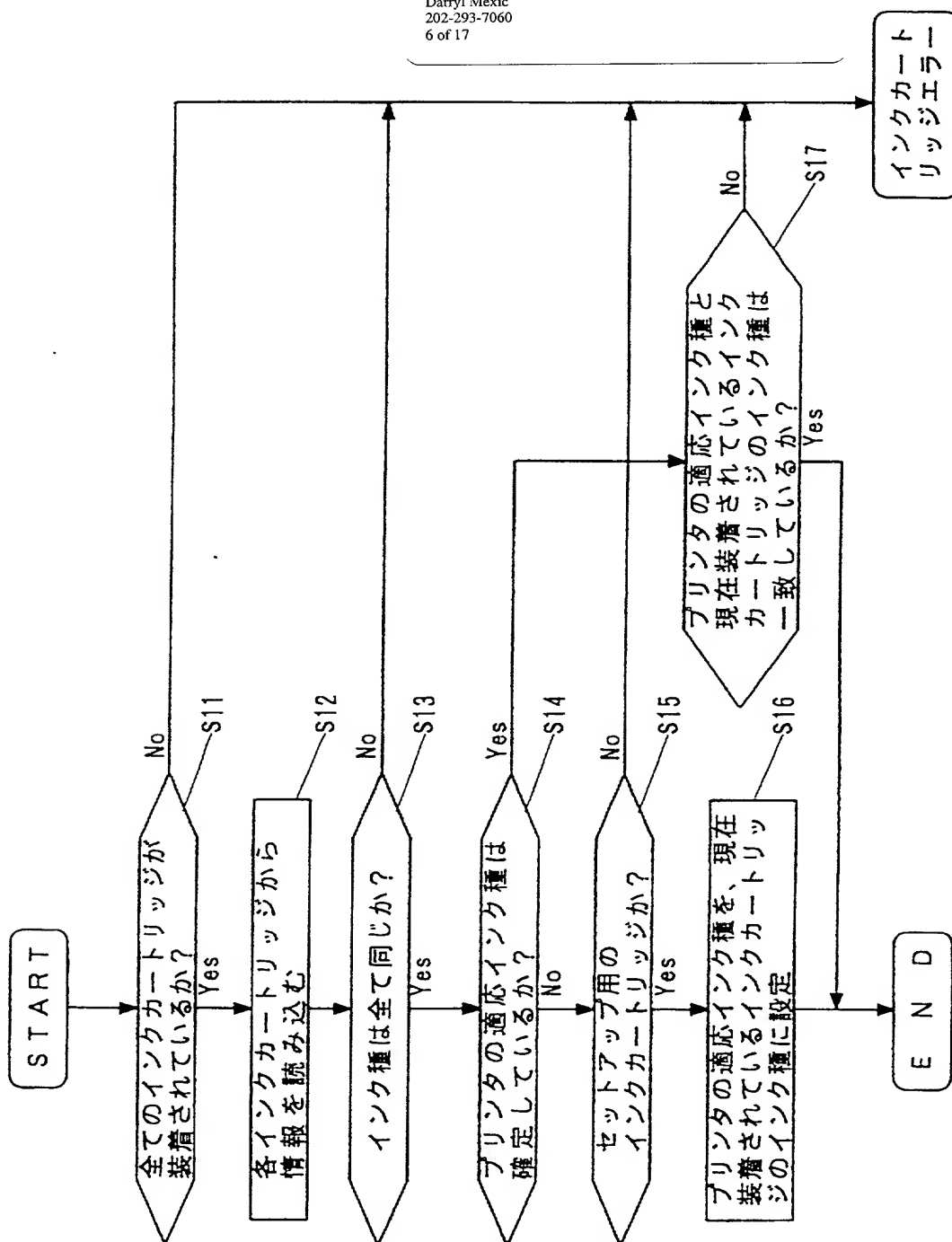
67 matching information table

68 display system

A operation inhibiting command

【図6】Fig. 6.

KOBAYASHI, et al
Q67835
INK JET TYPE RECORDING APPARATUS, INK TYPE
INFORMATION SETTING METHOD IN THE APPARATUS
AND INK CARTRIDGE USED IN THE APPARATUS
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[図2]

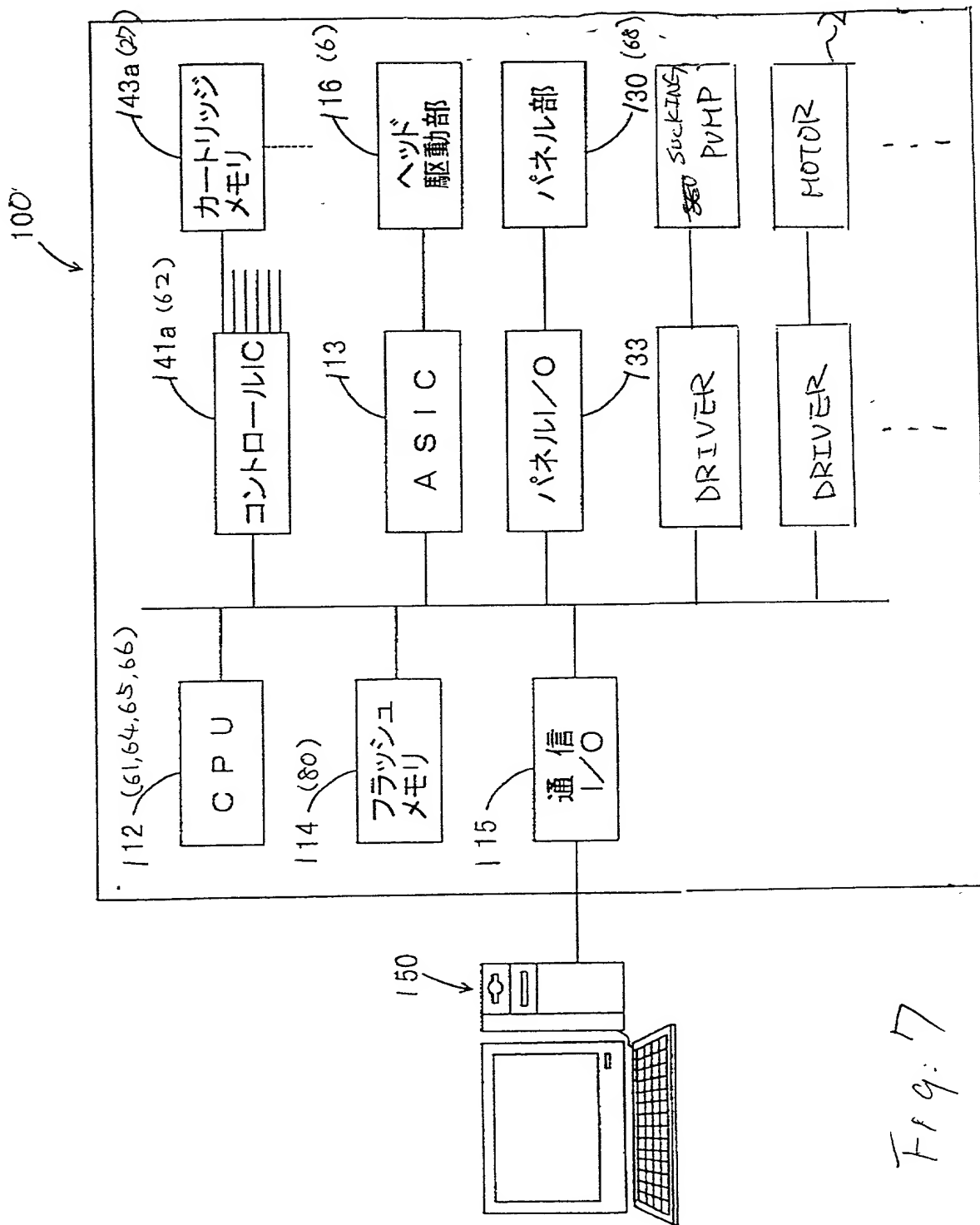


Fig. 17

【図3】

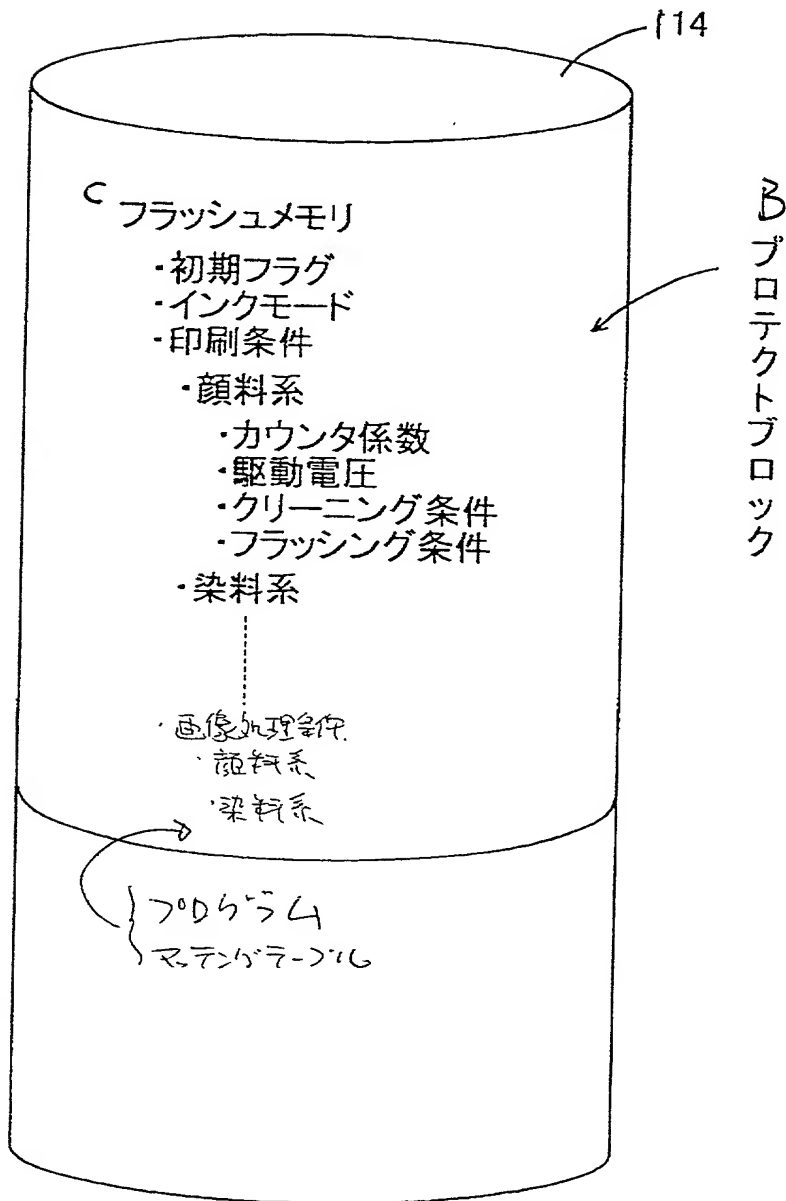


Fig. 8

[図 4]

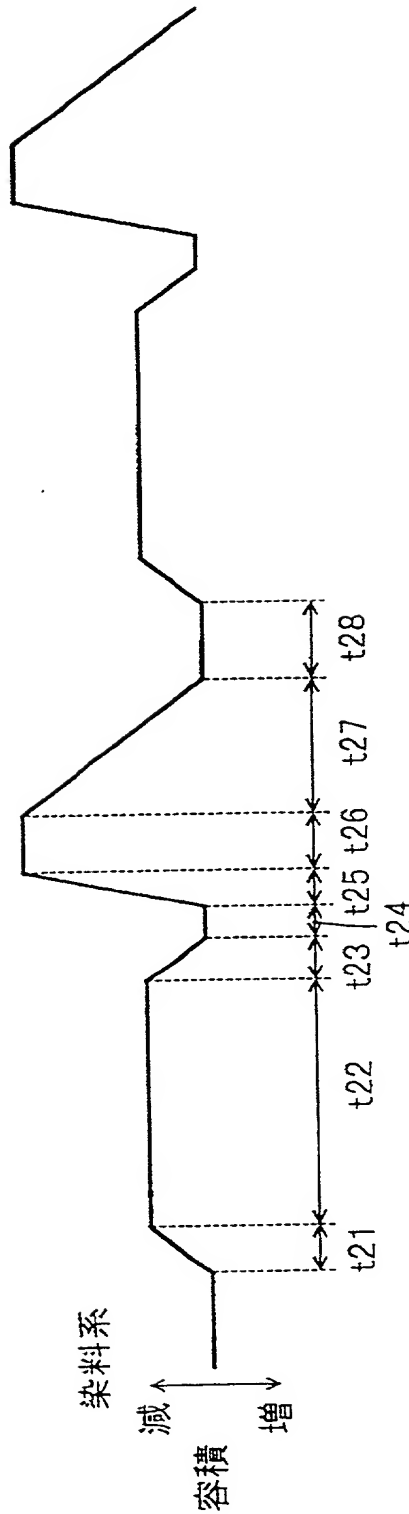
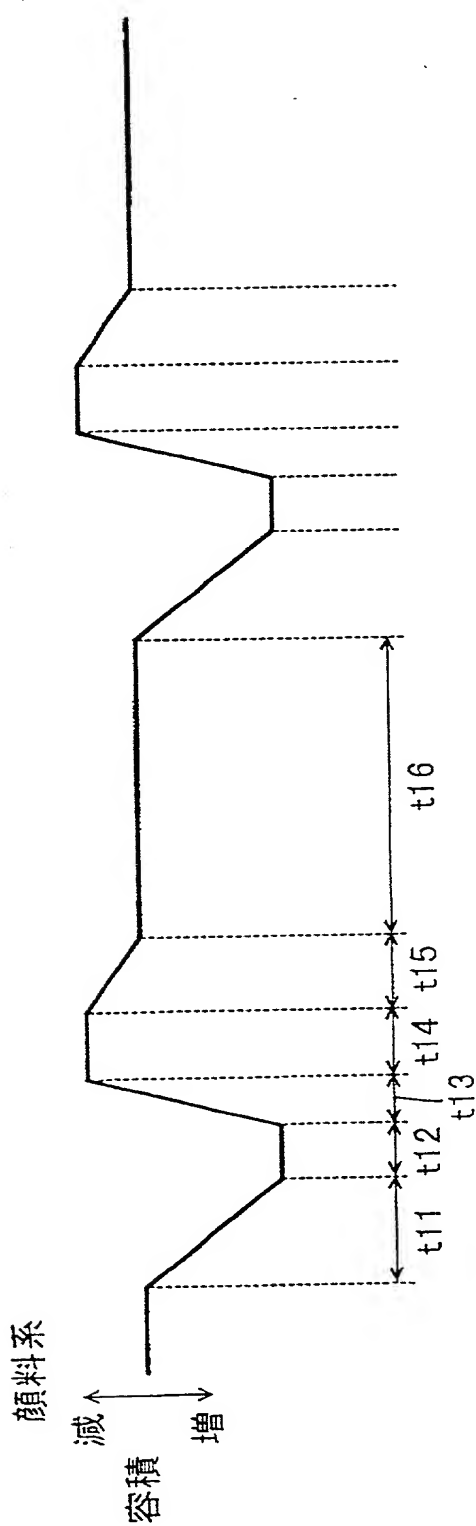


Fig. 9

Pigment group
Decrement
Volume
Increment

Dye group
Decrement
Volume
Increment

43a...カートリッジメモリ

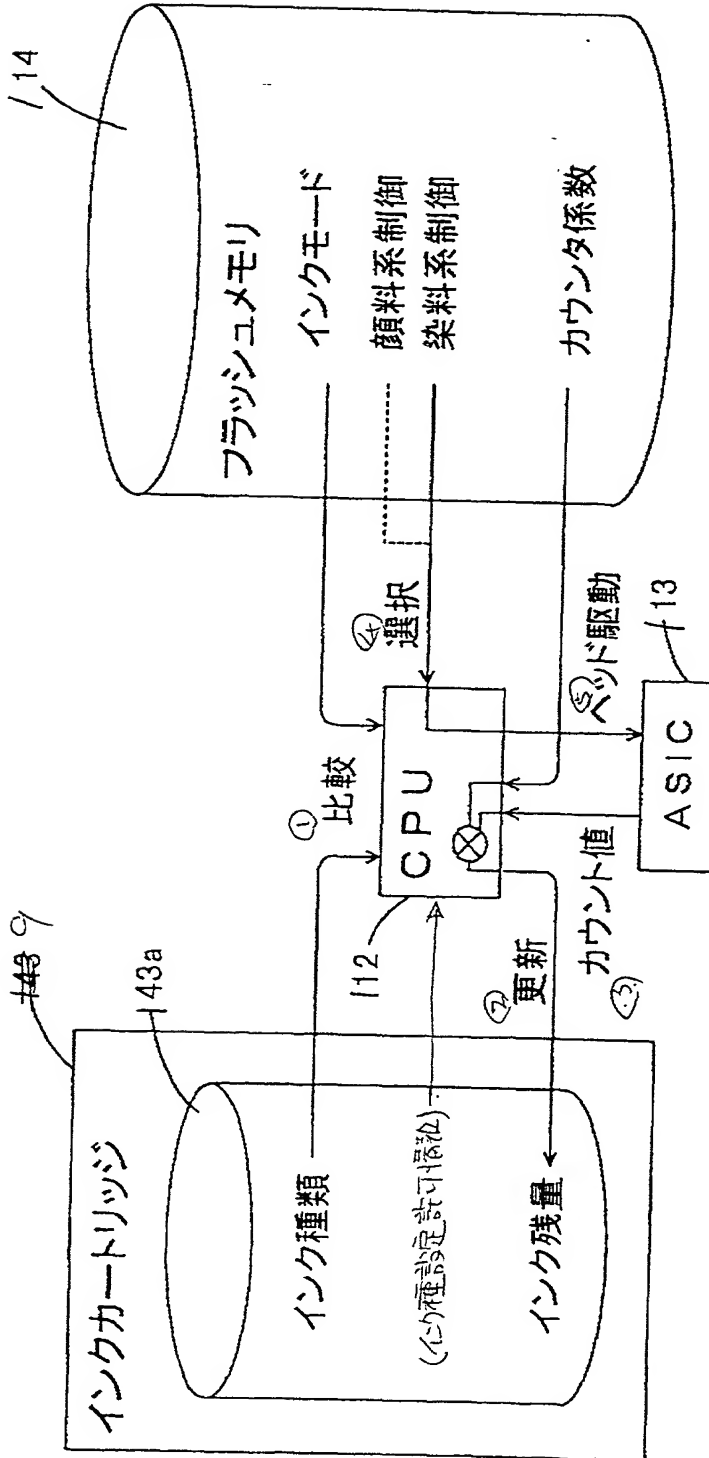


Fig. 10

【図6】

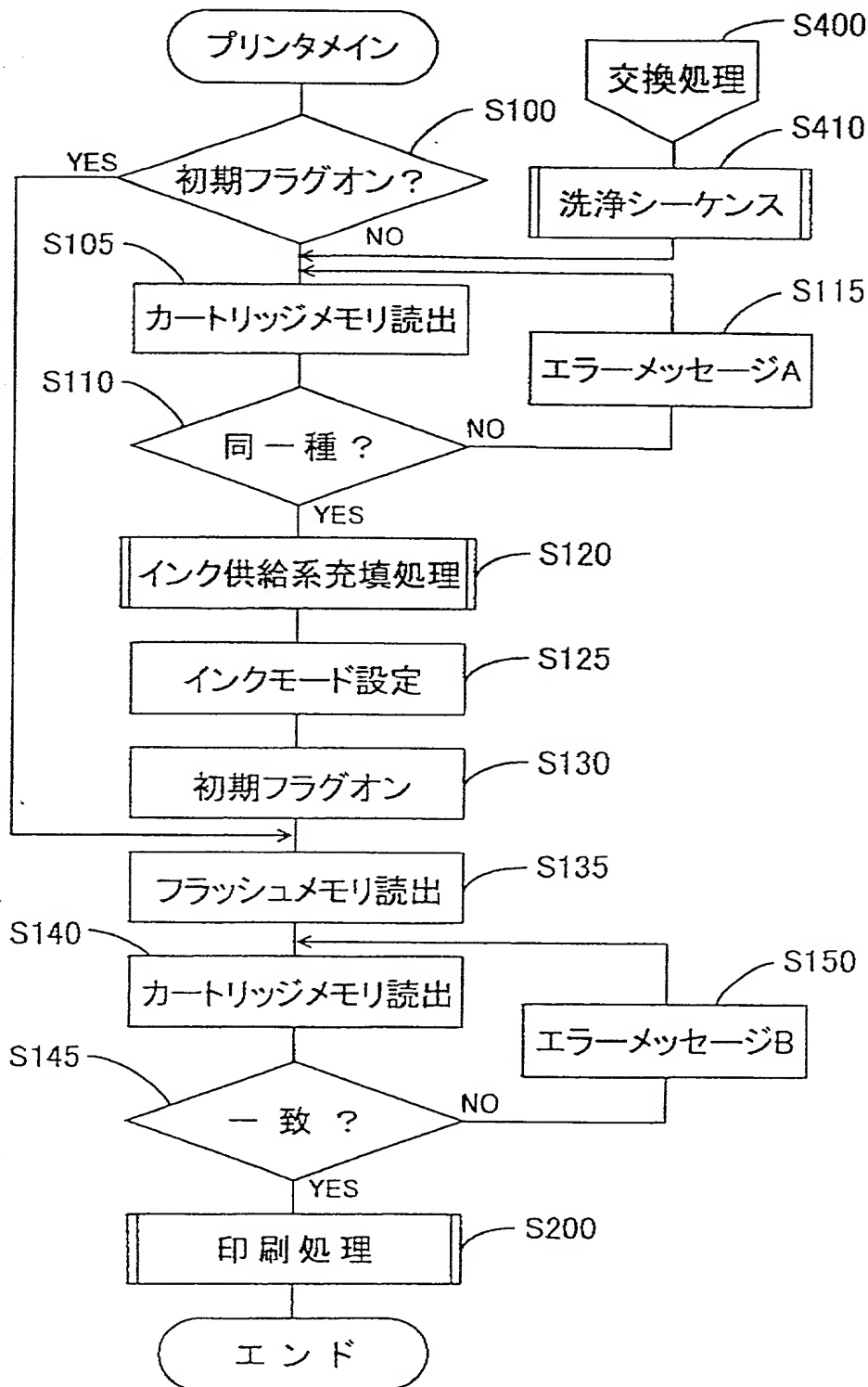


Fig. 11

図 7

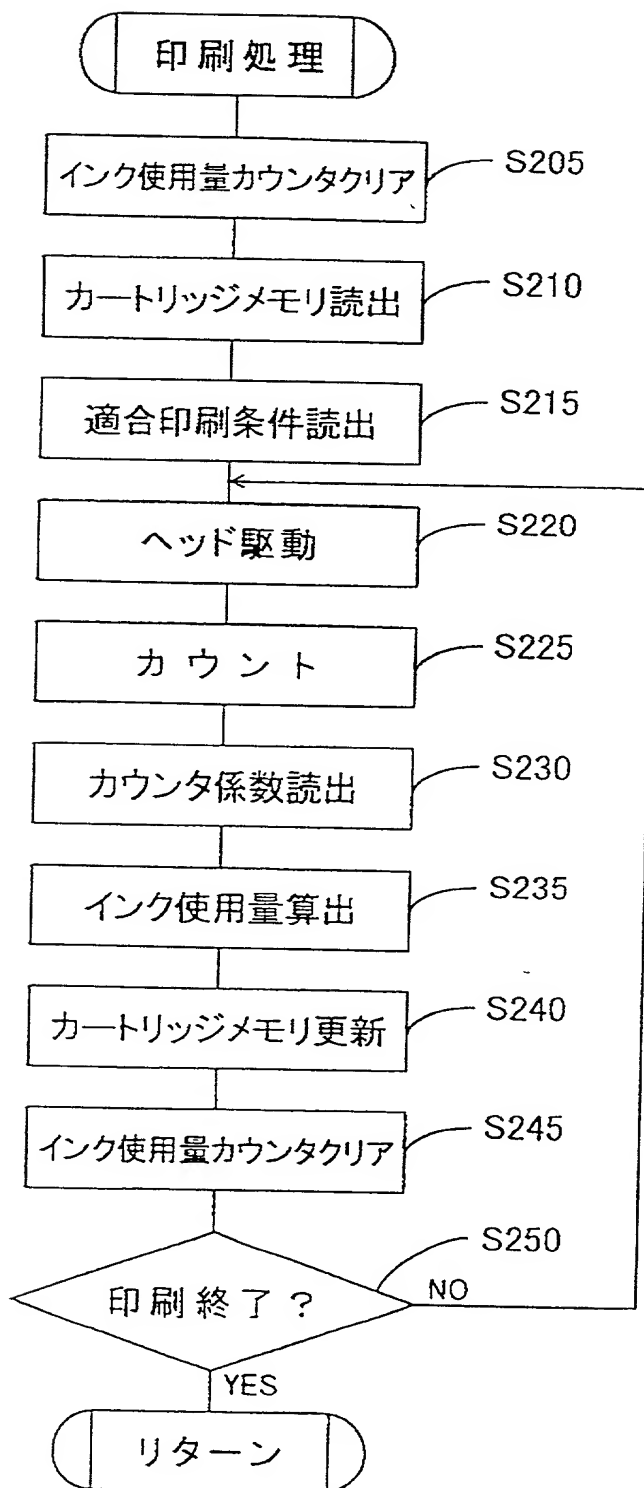


Fig. 7

【図8】

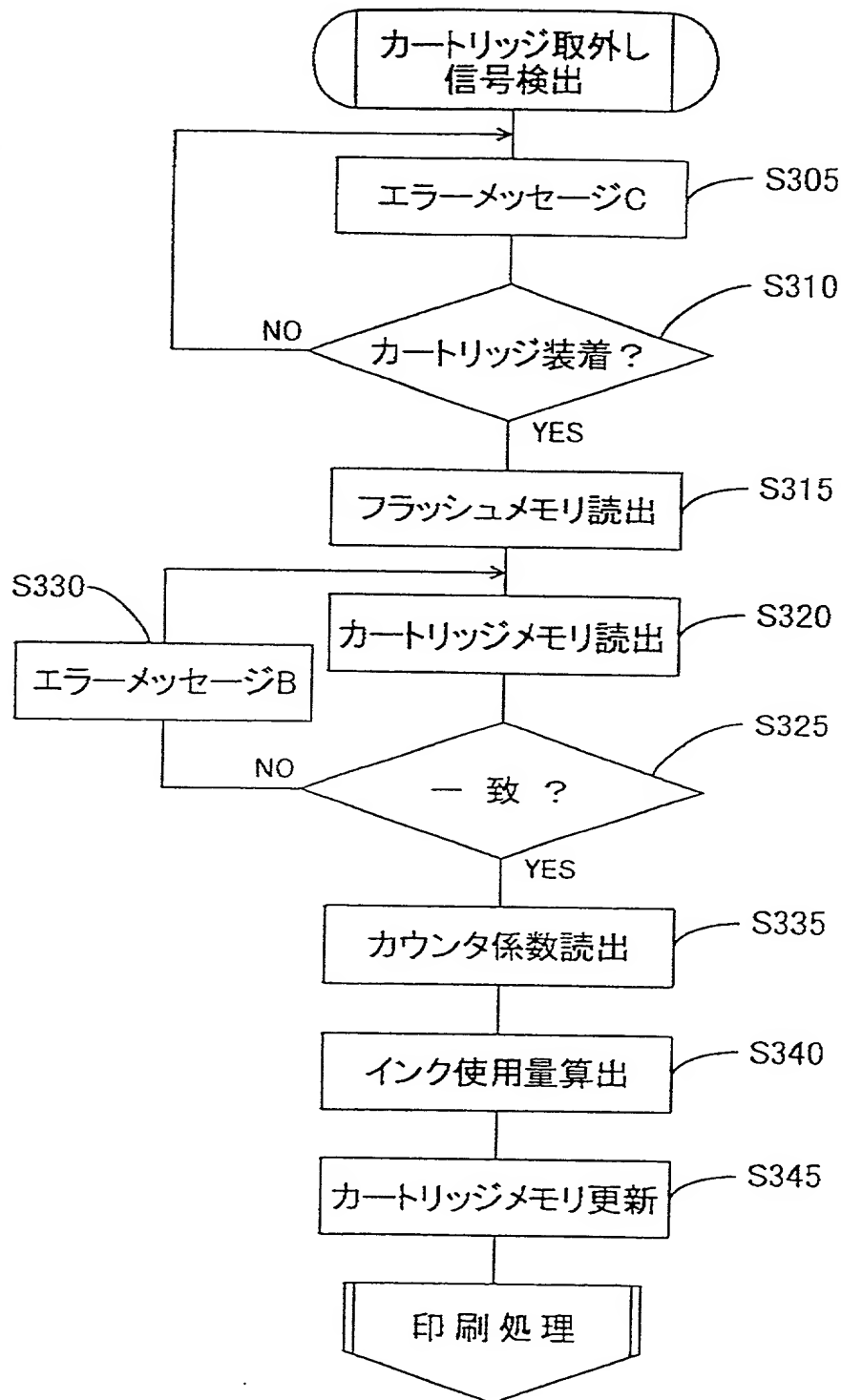


Fig. 13

[X-9]

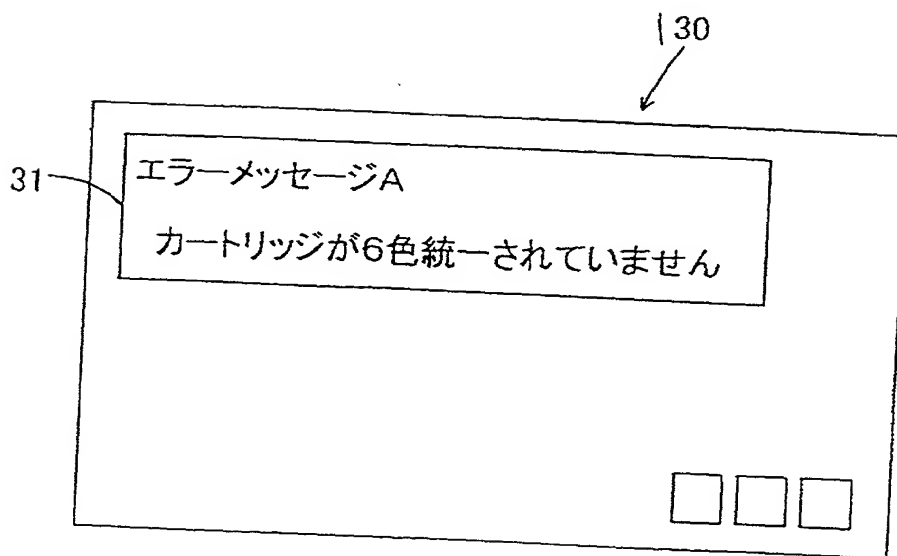


Fig. 14

Fig. 14

Error message A

Six colors of cartridges are not unified.

~~【図10】~~

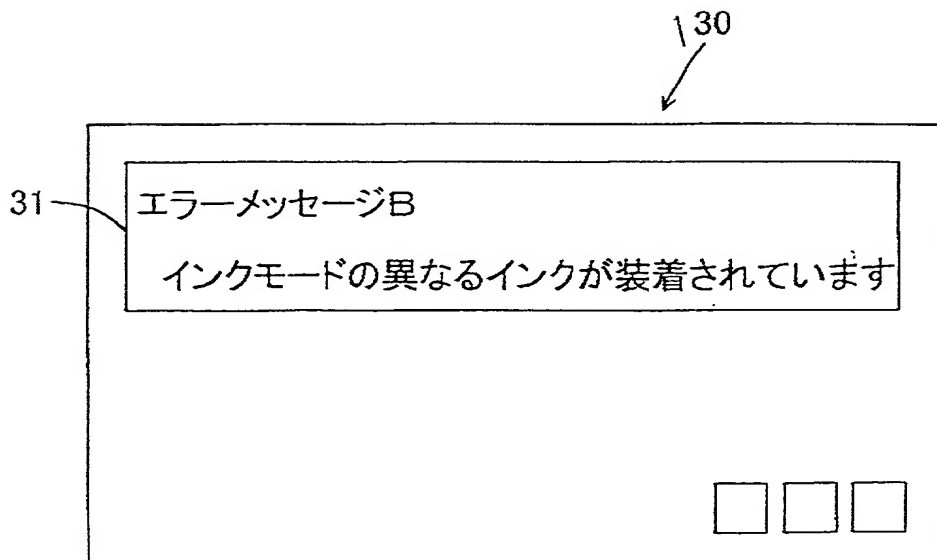


Fig. 15

Fig. 15

Error message B

Ink having a different ink mode is attached.

~~【図11】~~

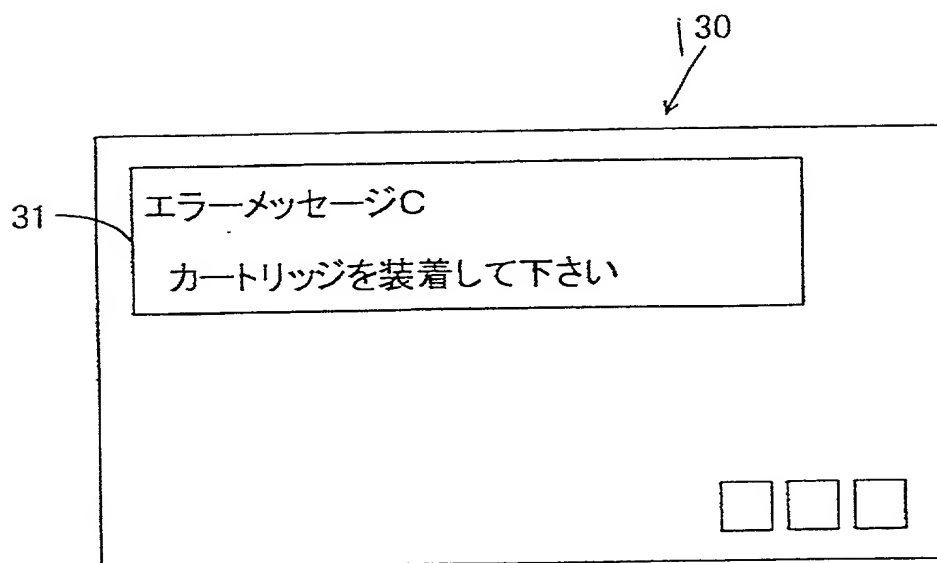


Fig. 16

Fig. 16

Error message C

Attach a cartridge.

[図12]

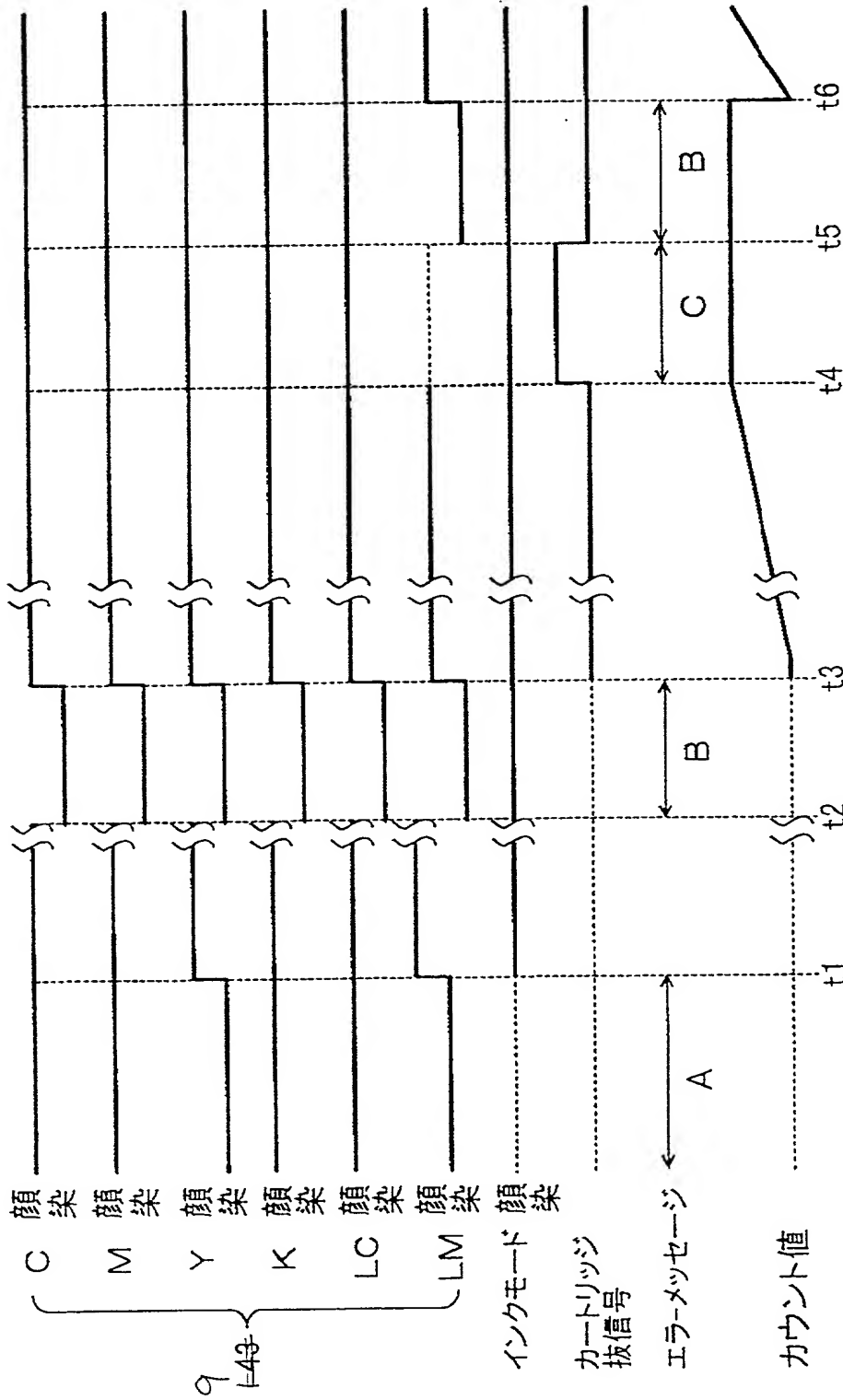


Fig. 12

Fig. 17

Fig. 6

- (S11) All ink cartridges are attached ?
 - (S12) Read information from each ink cartridge.
 - (S13) All ink types are identical ?
 - (S14) An adaptive ink type (ink mode) of a printer
is determined ?
 - (S15) An ink cartridge for set-up ?
 - (S16) Set the adaptive ink type (ink mode) of the
printer to an ink type of an ink cartridge which is
currently attached.
 - (S17) Is the adaptive ink type of the printer
coincident with the ink type of the ink cartridge which
is currently attached ?
- Ink cartridge error

Fig. 7

112 (61, 64, 65, 66) CPU

114 (80) Flash memory

115 Communication input/output interface

141a (62) Control IC

113 ASIC

133 Panel I/O

143a (27) Cartridge memory

116 (6) Head driving section

130 (68) Panel section

Fig. 8

B Protect block

C Flash memory

Initial Flag

Ink mode

Printing condition

Pigment group

Counter coefficient

Driving voltage

Cleaning condition

Flushing condition

Dye group

..

..

..

Image processing condition

Pigment group

..

Dye group

..

Program for executing flow charts (Figs. 6, and/or
11, 12, 13)

Matching table

Fig. 10

9 Ink cartridge

143a Ink cartridge memory

Ink type

(Ink type setting permission information)

Residual ink amount

- 1) Compare
- 2) Update
- 3) Count value
- 4) Select
- 5) Head Driving

114 Flash memory

Ink mode

Pigment group control

Dye group control

Counter coefficient

Fig. 11

Printer main control program

S100 Initial Flag ON ?
S105 Read cartridge memory
S110 Same type ?
S115 Error message A
S120 Filling operation for ink supply system
S125 Set ink mode
S130 Initial Flag ON
S135 Read flash memory
S140 Read cartridge memory
S145 Identical ?
S150 Error message B
S200 Printing process
End

S400 Exchange process program
S410 Cleaning sequence

Fig. 12

Printing process program

S205 Clear ink consumption amount counter
S210 Read cartridge memory
S215 Read adapted printing condition
S220 Drive head
S225 Count
S230 Read counter coefficient
S235 Calculate ink consumption amount
S240 Update cartridge memory
S245 Clear ink consumption amount counter
S250 Printing is ended ?
Return

Fig. 13

Detect signal indicative of cartridge removal

S305 Error message C

S310 Cartridge attached ?

S315 Read flash memory

S320 Read cartridge memory

S325 Identical ?

S330 Error message B

S335 Read counter coefficient

S340 Calculate ink consumption amount

S345 Update cartridge memory

Printing process program

Fig. 17

C Pigment

Dye

M Pigment

Dye

Y Pigment

Dye

K Pigment

Dye

LC Pigment

Dye

LM Pigment

Dye

Ink mode

Pigment

Dye

Cartridge removal signal

Error message

Count value